IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS

Applicant(s)	Judd	**APPEAL BRIEF**
Serial No.	10/782,519	
Filing Date	2/18/2004	
Confirmation No.	2145	
Examiner Name	JAKOVAC, RYAN J	
Group Art Unit	4712	
Attorney Docket No.	H0006282-5435	
Title: SYSTEMS AND METHOD FOR ENCODING AND DECODING DATA MESSAGES		

1. Introduction

On August 13, 2008, Appellant filed a notice of appeal from the final rejection of claims set forth in the Office Action mailed May 14, 2008. This Appeal Brief is accompanied by a fee in the amount of $540.00 as required under 37 C.F.R. §41.20(b)(2).

2. Real Party in Interest

The real party in interest in the above-captioned application is the assignee Honeywell International Inc.

3. Related Appeals and Interferences

There are no other appeals or interferences known to Appellants which will have a bearing on the Board's decision in the present appeal.

4. Status of the Claims

Claims 1-39 are pending in the application and are the subject of this appeal. In the office action mailed May 14, 2008, claims 1-6, 8, 10-12, 14, 15, 17, 19-21, 23-25, 27, 30, 31, 33, 35, 36, and 38 were finally rejected under 35 U.S.C. §102(b). Claims 7, 9, 16, 18, 26, 28, 32, 34, 37 and 39 were finally rejected under 35 U.S.C. §103(a).

5. Status of Amendments

No amendment has been filed subsequent to the Final Office Action mailed May 14, 2008.

6. Summary of Claimed Subject Matter

Pursuant to 37 C.F.R. §41.37(c)(1)(v), Appellant provides the following concise explanation of the subject matter defined in each independent claim with reference to the specification by page and line number and to the drawings by reference number. Appellant submits that the citations to the specification and drawings are not intended to be exhaustive and that other support for the various claims may also be found throughout the specification and drawings.

A. Claim 1

Claim 1 is directed to a method of communicating data messages. An exemplary method of communicating ASN.1 messages is described at least at page 6, line 8 to page 7, line 11, and is shown in Fig. 3. The method of claim 1 comprises receiving a message formatted according to Abstract Syntax Notation One (ASN.1) (block 82); and decoding the received message based on a previously stored configuration information file (CIF), wherein the CIF is a table-driven data file (block 88).

B. Claim 10

Claim 10 is directed to a system for communicating data messages. An exemplary system is described at least at page 4, line 6 to page 6, line 5, and is shown in Fig. 2. The system of claim 10 comprises a means for receiving a message formatted according to Abstract Syntax Notation One (ASN.1) (26); a memory (22) for storing and accessing a configuration information file (CIF), wherein the CIF is a table-driven data file; and a means for decoding the received message based on the stored CIF (24).

C. Claim 19

Claim 19 is directed to a system for communicating data messages. An exemplary system is described at least at page 4, line 6 to page 6, line 5, and is shown in Fig. 2. The system of claim 19 comprises a receiver (26) configured to receive a message formatted according to Abstract Syntax Notation One (ASN.1) using an ASN.1 compatible encoding rules; a memory (22) configured to store a configuration information file (CIF), wherein the CIF is a table-driven data file; and a processor (24) coupled to the receiver and the memory, the processor being configured to decode the received message based on the stored CIF.

D. Claim 30

Claim 30 is directed to a method of communicating data messages. An exemplary process corresponding to the method of claim 30 is described at least at page 8, lines 14-18. The method of claim 30 comprises encoding a message formatted according to ASN.1 wherein encoding is based on a previously stored configuration information file (CIF) (pg. 8, lines 14-15), the CIF being a table-driven data file (pg. 6, lines 15-16); and transmitting the encoded message (pg. 8, lines 16-18).

E. Claim 35

Claim 35 is directed to a system of communicating data messages. An exemplary system is described at least at page 4, line 6 to page 6, line 5, and is shown in Fig. 2. The system of claim 35 comprises a means for encoding a message formatted according to ASN.1 (24), wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file; and a means for transmitting the encoded message (26).

7. Grounds of Rejection to be Reviewed on Appeal

Whether claims 1-6, 8, 10-12, 14, 15, 17, 19-21, 23-25, 27, 30, 31, 33, 35, 36, and 38 are anticipated under 35 U.S.C. §102(b) by Tidwell (European Patent Application No. 0981088 A1)?

Whether claims 9, 18, 28, 34, and 39 are obvious under 35 USC § 103(a) over Tidwell (European Patent Application No. 0981088 A1) in view of Appellant's admitted prior art?

Whether claims 7, 16, 26, 32, and 37 are obvious under 35 USC § 103(a) over Tidwell (European Patent Application No. 0981088 A1)?

Whether claim 29 is obvious under under 35 USC § 103(a) over Tidwell (European Patent Application No. 0981088 A1) in view of Allison (U.S. Patent No. 5,917,900)?

8. Arguments

A. Rejections of claims 1-6, 8, 10-12, 14, 15, 17, 19-21, 23-25, 27, 30, 31, 33, 35, 36, and 38 under 35 U.S.C. §102(b)

1. The Applicable Law

35 U.S.C. §102 provides in relevant part:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. 35 U.S.C. § 102(b) rejection analysis

a. Claims 1-6, 8

Claim 1 recites:

A method comprising:
a. receiving a message formatted according to Abstract Syntax Notation One (ASN.1); and
b. decoding the received message based on a previously stored configuration information file (CIF), wherein the CIF is a table-driven data file.

Nothing in Tidwell teaches or suggests "decoding the received message based on a previously stored configuration information file (CIF), ***wherein the CIF is a table-driven data file***." In addressing this limitation, the Examiner asserted that "a file and a 'data file' are equivalent." Final Office Action (FOA) p. 10. However, while "data files" are one type of file, not all files are "data files" as described and claimed.

The present application clearly distinguishes between "data files" and other types of files containing routines or executable code. In particular, the present application states, with respect to prior approaches, "For this traditional approach, ASN.1 defined messages are fed through an ASN.1 compiler to obtain compilable or linkable entities (e.g., ***C source file*** structures and modules, ***object files***, etc.)." pg. 2, lines 13-15 (emphasis added). With respect to embodiments of the present invention, the present application discusses the use of a Configuration Information File (CIF) which is "tree-based and table driven to define message syntax." pg. 6, lines 15-16. Thus, the embodiment of claim 1 uses only data stored in a tree-based and table-driven file to define "what actions are to be taken or can be taken with the message" (pg. 6, lines 16-17) as

opposed to prior approaches which use files containing executable routines or source code to achieve similar results. Therefore, the present specification clearly distinguishes a table-driven "data file" from other files containing executable code or routines.

In addition, the Examiner asserted that "The phrase 'table-driven' is a phrase that taken in its broadest reasonable interpretation is well met by the Tidwell reference." FOA p. 11. The Examiner stated that "The CIF also defines what actions are to be taken or can be taken with a reference" and referred to paragraphs [0025] and [0034] of Tidwell as support of the assertion that Tidwell teaches "that a message is decoded based on the ASN.1 specification and a set of rules." FOA p. 10 The Examiner then asserted that "the aforementioned paragraphs of Tidwell exactly teach this concept since both the ASN.1 specification and the set of rules used as referenced in Tidwell are functional in the decoding of the message." FOA pp. 11.

However, although Tidwell and the present application both discuss achieving similar results of decoding/encoding ASN.1 messages, such achievement of similar results does not indicate that Tidwell uses the same techniques as described and claimed in the present application. For example, the present specification states, in the background section, "in order to be communicated via a data communications service …, the messages are encoded and then decoded on the receiving side using encoding/decoding rules." For the prior approaches, "ASN.1 defined messages are fed through an ASN.1 compiler to obtain compilable or linkable entities (e.g., C source file structures and modules, object files, etc.). The entities are compiled and linked with the other operational software components to obtain resultant software executable, which includes the ability to decode and encode messages that were defined in the original ASN.1 message schema." pg. 2, lines 7-18. Thus, while the prior approaches discussed in the present application decoded/encoded ASN.1 messages, such approaches did not use a table-driven CIF file, as described and claimed.

Similar to the above prior approaches, Tidwell discusses encoding/decoding ASN.1 messages using an ADEP which "can be produced by an ASN.1 compiler which converts an ASN.1 specification, such as that in Table 2, into encoding and decoding ***routines in the programming language of the application program*** 305. Where a high-level programming language (for example, C, C++, FORTRAN) is used to write the application program, the output of the compiler is ***source code*** which is again compiled with the application program 305." Pg. 7

paragraph [0035] (emphasis added). Thus, as with the above prior approaches, Tidwell encodes/decodes ASN.1 messages through "compilable or linkable entities" such as "source code", but does not teach or suggest encoding/decoding such ASN.1 messages by using a CIF which is a "table-driven data file" as described and claimed.

Furthermore, the proper standard to be applied in interpreting claim language is to give "claims their broadest reasonable construction '***in light of the specification*** as it would be interpreted by one of ordinary skill in the art.'" MPEP § 2111. As discussed above, the present specification clearly distinguishes between a "table-driven" configuration information file and "compilable entities" such as source files. Therefore, one of ordinary skill in the art would not reasonably interpret the "encoding and decoding routines in the programming language of the application program" or the compiler source code output, as discussed in Tidwell, to be a "table-driven" CIF as described and claimed in the present application.

For the reasons stated above, Appellant asserts that Tidwell fails to teach or suggest "decoding the received message based on a previously stored configuration information file (CIF), ***wherein the CIF is a table-driven data file***."

Claims 2-6 and 8 depend from claim 1 and, thus, are allowable for at least the reasons stated above with respect to claim 1.

b. Claims 10-12, 14, 15, 17

Claim 10 recites:

> A system comprising:
> a means for receiving a message formatted according to Abstract Syntax Notation One (ASN.1);
> a memory for storing and accessing a configuration information file (CIF), wherein the CIF is a table-driven data file; and
> a means for decoding the received message based on the stored CIF.

Nothing in Tidwell teaches or suggests "a means for decoding the received message ***based on the stored CIF***." In addressing this limitation in claim 10, the Examiner referred to paragraph [0025] of Tidwell and equated "a set of encoding rules" with a CIF. FOA pg. 4. Appellant respectfully asserts that the set of encoding rules discussed in Tidwell are not equivalent to a table-driven CIF as described and claimed in the present application.

With respect to the encoding rules Tidwell states "ASN.1 provides a standardized set of

rules for representing instances of data structures which can then be encoded into a stream of bytes according to a predefined set of encoding rules. Although the most widely used ***encoding rules are the "Basic Encoding Rules" or BER***, it should be understood that ***other encoding rules, e.g., Packed Encoding Rules (PER)***, may also be used." Para. [0024] (emphasis added). The present application also discusses the use of encoding rules. For example, the present application discusses encoding and processing "downlink messages using the ***PER*** based on the message schema within the CIF. Certain messages may be defined using some other ***ASN.1 compatible encoding rule such as Basic Encoding Rules (BER)***." Pg. 7, lines 8-10 (emphasis added). Based on the passages above, the present application clearly distinguishes between the Configuration Information File and the encoding rules discussed in both Tidwell and the present application. A set of encoding rules, therefore, is not equivalent to a CIF as described and claimed.

Furthermore, whereas the present application states that the downlink and uplink messages are encoded and processed "using the PER ***based on the message schema within the CIF***," Tidwell discusses using programming routines. In particular, Tidwell states:

> The ADEP 310 translates a data structure within the application program 305 into a stream of bytes in accordance with an ASN.1 specification and a set of encoding rules. The encoding rules can include, but are not limited to, BER and PER ... ***In order to perform this function, the ADEP 310 includes routines written in the same programming language*** as the application program 305 for encoding a data structure produced by the application program 305 into an ASN.1 message and decoding an ASN.1 message into a data structure understandable by the application program. Para. [0034] (emphasis added)

Thus, as with the prior approaches discussed in the present application, Tidwell encodes/decodes ASN.1 messages through "compilable or linkable entities" such as "source code", but does not teach or suggest encoding/decoding such ASN.1 messages by using a CIF which is a "table-driven data file" as described and claimed.

Claims 11, 12, 14, 15, and 17 depend from claim 10 and, thus, are allowable for at least the reasons stated above with respect to claim 10.

c. Claims 19-21, 23-25, 27

Claim 19 recites:

> A system comprising:
> a receiver configured to receive a message formatted according to

Abstract Syntax Notation One (ASN.1) using an ASN.1 compatible encoding rules;

a memory configured to store a configuration information file (CIF), wherein the CIF is a table-driven data file; and

a processor coupled to the receiver and the memory, the processor being configured to decode the received message based on the stored CIF.

Nothing in Tidwell teaches or suggests "the processor being configured to decode the received message based on the stored CIF." In rejecting claim 19, the Examiner presents arguments similar to those discussed above with respect to claim 10. In particular, the Examiner apparently equated "a set of encoding rules" with a table-driven CIF. FOA pg. 6. Therefore, Appellant asserts that the arguments set forth above with respect to claim 10 are also applicable to claim 19. Based on those arguments, a set of encoding rules is not equivalent to a table-driven CIF. Nothing in Tidwell teaches or suggests the use of a table-driven CIF as claimed in claim 19. Therefore, claim 19 is not anticipated by Tidwell.

Claims 20, 21, 23-25, 27 depend from claim 19 and, thus, are allowable for at least the reasons stated above with respect to claim 19.

d. Claims 30, 31, and 33

Claim 30 recites:

A method comprising:

a. encoding a message formatted according to ASN.1, wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file; and

b. transmitting the encoded message.

Nothing in Tidwell teaches or suggests "encoding a message formatted according to ASN.1, wherein encoding is based on a previously stored ***configuration information file (CIF), the CIF being a table-driven data file***." In rejecting claim 30, the Examiner present arguments similar to those discussed above with respect to claims 1 and 10. In particular, the Examiner apparently equated "a set of encoding rules" with a table-driven CIF. FOA pg. 3. Therefore, Appellant asserts that the arguments set forth above with respect to claims 1 and 10 are also applicable to claim 30. Based on those arguments, a set of encoding rules is not equivalent to a table-driven CIF. Nothing in Tidwell teaches or suggests the use of a table-driven CIF as claimed in claim 30. Therefore, claim 30 is not anticipated by Tidwell.

Claims 31 and 33 depend from claim 30 and, thus, are allowable for at least the reasons stated above with respect to claim 30.

e. Claims 35, 36, and 38

Claim 35 recites:

> A system comprising:
> a means for encoding a message formatted according to ASN.1, wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file; and
> a means for transmitting the encoded message.

Nothing in Tidwell teaches or suggests "wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file." In rejecting claim 35, the Examiner referred to arguments made with respect to claims 1 and 10. FOA pg. 3. In particular, the Examiner apparently equated "a set of encoding rules" with a table-driven CIF. FOA pg. 3. Therefore, Appellant asserts that the arguments set forth above with respect to claims 1 and 10 are also applicable to claim 35. Based on those arguments, a set of encoding rules is not equivalent to a table-driven CIF. Nothing in Tidwell teaches or suggests the use of a table-driven CIF as claimed in claim 35. Therefore, claim 35 is not anticipated by Tidwell.

Claims 36 and 38 depend from claim 35 and, thus, are allowable for at least the reasons stated above with respect to claim 35.

For the reasons set forth above, Appellant respectfully requests that the rejection of claims 1-6, 8, 10-12, 14, 15, 17, 19-21, 23-25, 27, 30, 31, 33, 35, 36, and 38 be reversed.

B. Rejections of claims 7, 9, 16, 18, 26, 28, 29, 32, 34, 37, and 39 under 35 U.S.C. §103(a)

1. The Applicable Law

35 U.S.C. § 103 provides in relevant part:

> Conditions for patentability, non-obvious subject matter.
>
> (a) A patent may not be obtained though the invention is not identicallay disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention

> was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

"The ultimate determination…whether an invention is or not obvious is a legal conclusion based on underlying factual inquiries including (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) the objective evidence of nonobviousness." In re Dembiczak, 175 F.3d 994, 998, 50 USPQ2d 1614, 1616 (1999) (citing Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966)).

When applying 35 U.S.C. §103(a), the claimed invention must be considered as a whole; the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; the references must be viewed without the benefit of impermissible hindsight afforded by the claimed invention and a reasonable expectation of success is the standard with which obviousness is determined. Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2143.

2. 35 U.S.C. § 103(a) rejection analysis

a. Claims 9, 18, 28, 34, and 39 were rejected under 35 USC § 103(a) as being unpatentable over Tidwell (European Patent Application No. 0981088 A1) in view of Appellant's admitted prior art.

Claims 9, 18, 28, 34, and 39 depend from claims 1, 10, 19, 30, and 35, respectively, and inherit the limitations of the respective independent claim. As stated above, nothing in Tidwell teaches or suggests "a configuration information file (CIF), wherein the CIF is a table-driven data file." The discussion of ACARS and ATN in the present application does not cure the defect in Tidwell. Therefore, for at least the reasons stated above, claims 9, 18, 28, 34 and 39 are not obvious over Tidwell in view of applicants' admitted prior art. Appellant respectfully requests that the rejection be reversed.

b. Claims 7, 16, 26, 32, and 37 were rejected under 35 USC § 103(a) as being unpatentable over Tidwell (European Patent Application No. 0981088 A1).

Claims 7, 16, 26, 32 and 37 depend from claims 1, 10, 19, 30, and 35, respectively, and inherit the limitations of the respective independent claim. As stated above, nothing in Tidwell teaches or suggests "a configuration information file (CIF), wherein the CIF is a table-driven data file." Therefore, for at least the reasons stated above, claims 7, 16, 26, 32 and 37 are not obvious over Tidwell. Applicants respectfully request that the rejection be withdrawn

c. Claim 29 was rejected under 35 USC § 103(a) as being unpatentable over Tidwell (European Patent Application No. 0981088 A1) in view of Allison (U.S. Patent No. 5,917,900).

Claim 29 depends from claim 19 and, thus, inherits the limitations of claim 19. As discussed above, nothing in Tidwell teaches or suggests ", wherein the CIF is a table-driven data file." Nothing in Allison cures this defect in Tidwell. Therefore, for at least the reasons stated above, claim 29 is not obvious over Tidwell in view of Allison. Applicants respectfully request that the rejection be withdrawn.

Respectfully submitted,

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Date: October 11, 2008

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CLAIMS APPENDIX

1. A method comprising:

a. receiving a message formatted according to Abstract Syntax Notation One (ASN.1); and

b. decoding the received message based on a previously stored configuration information file (CIF), wherein the CIF is a table-driven data file.

2. The method of claim 1, wherein the received message is formatted according to an ASN.1 compatible encoding rule.

3. The method of claim 1, wherein the CIF includes schema of the ASN.1 formatted message.

4. The method of claim 3, wherein the CIF further includes a means for defining new messages without updating associated operational software.

5. The method of claim 1, further comprising: c. encoding a message formatted according to ASN.1, wherein encoding is based on the CIF; and d. transmitting the encoded message.

6. The method of claim 5, wherein encoding the message is performed according to an ASN.1 compatible encoding rule.

7. The method of claim 5, wherein a-d are performed on an aircraft.

8. The method of claim 7, wherein transmitting and receiving are performed according to a datalink protocol.

9. The method of claim 8, wherein the datalink protocol includes an aeronautical datalink protocol.

10. A system comprising:

a means for receiving a message formatted according to Abstract Syntax Notation One (ASN.1);

a memory for storing and accessing a configuration information file (CIF), wherein the CIF is a table-driven data file; and

a means for decoding the received message based on the stored CIF.

11. The system of claim 10, wherein the received message is formatted according to an ASN.1 compatible encoding rule.

12. The system of claim 10, wherein the CIF includes schema of the ASN.1 formatted message.

13. The system of claim 12, wherein the CIF further includes a means for defining processing of a message without updating associated operational software.

14. The system of claim 10, further comprising: a means for encoding a message formatted according to ASN.1, wherein encoding is based on the CIF; and a means for transmitting the encoded message.

15. The system of claim 14, wherein the means for encoding encodes the message according to an ASN.1 compatible encoding rule.

16. The system of claim 14, wherein the system is located on an aircraft.

17. The system of claim 16, wherein transmitting and receiving are performed according to a datalink protocol.

18. The system of claim 17, wherein the datalink protocol includes an aeronautical datalink protocol.

19. A system comprising:

a receiver configured to receive a message formatted according to Abstract Syntax Notation One (ASN.1) using an ASN.1 compatible encoding rules;

a memory configured to store a configuration information file (CIF), wherein the CIF is a table-driven data file; and

a processor coupled to the receiver and the memory, the processor being configured to decode the received message based on the stored CIF.

20. The system of claim 19, wherein the ASN.1 compatible encoding rule includes at least one of Basic Encoding Rules (BER) or Packed Encoding Rules (PER).

21. The system of claim 19, wherein the CIF includes schema of the ASN.1 formatted message.

22. The system of claim 21, wherein the CIF further includes a means for defining processing of a message without updating associated operational software.

23. The system of claim 19, wherein the processor comprises a component configured to encode a message formatted according to ASN.1 based on the CIF.

24. The system of claim 23, further comprising a transmitter configured to transmit the encoded message.

25. The system of claim 23, wherein the component configured to encode encodes the message according to an ASN.1 compatible encoding rule.

26. The system of claim 19, wherein the system is located on an aircraft.

27. The system of claim 26, wherein the receiver and transmitter perform data reception and transmission according to a datalink protocol.

28. The system of claim 27, wherein the datalink protocol includes an aeronautical datalink protocol.

29. The system of claim 27, wherein the datalink protocol includes the Transmission Control Protocol/Internet Protocol (TCP/IP).

30. A method comprising: a. encoding a message formatted according to ASN.1, wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file; and b. transmitting the encoded message.

31. The method of claim 30, wherein encoding the message is performed according to an ASN.1 compatible encoding rule.

32. The method of claim 30, wherein a and b are performed on an aircraft.

33. The method of claim 32, wherein transmitting and receiving are performed according to a datalink protocol.

34. The method of claim 33, wherein the datalink protocol includes an aeronautical datalink protocol.

35. A system comprising:

a means for encoding a message formatted according to ASN.1, wherein encoding is based on a previously stored configuration information file (CIF), the CIF being a table-driven data file; and

a means for transmitting the encoded message.

36. The system of claim 35, wherein the means for encoding encodes the message according to an ASN.1 compatible encoding rule.

37. The system of claim 35, wherein the system is located on an aircraft.

38. The system of claim 37, wherein transmitting and receiving are performed according to a datalink protocol.

39. The system of claim 38, wherein the datalink protocol includes an aeronautical datalink protocol.

EVIDENCE APPENDIX

There is nothing to present in the Evidence Appendix.

RELATED PROCEEDINGS APPENDIX

There is nothing to present in the Related Proceedings Appendix.